

Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (Currently amended) A frame structure of a vehicle comprising a flywheel housing, an intermediate housing and a transmission case that are connected to each other along a longitudinal axis of the vehicle to constitute a vehicle frame with an inner space, and to accommodate a running-power transmission mechanism including a speed change unit for changing a speed of a rotational power from an engine via a forward/rearward movement switching unit and a PTO transmission mechanism including a PTO clutch for selectively performing power-transmission or power-shutoff of a rotational power from the engine via the forward/rearward movement switching unit,

said flywheel housing having a first abutting surface and a second abutting surface respectively located closer to a first end and a second end of said flywheel housing along the longitudinal axis of the vehicle, said first abutting surface including a first opening that is sized to allow a flywheel to pass therethrough, said second abutting surface including a second opening that is sized to allow a forward/rearward movement switching unit to pass therethrough,

said intermediate housing having a hollow body portion that extends along the longitudinal axis of the vehicle and a flange portion that is located at a first end of said hollow body portion, said flange portion having an abutting surface against which said second end of the flywheel housing abuts, a support surface that is located radially inwardly of said abutting surface so as to support said forward/rearward movement

switching unit, and a first-end opening that is surrounded by said support surface and is closed by said forward/rearward movement switching unit, and

said forward/rearward movement switching unit including a reverser unit for switching the power transmission direction from a drive shaft extending along the vehicle longitudinal axis to a driven shaft located parallel to the drive shaft, and a reverser housing for accommodating said reverser unit and supporting said drive shaft and said driven shaft, said frame structure being characterized in that:

said speed change unit and said PTO clutch are accommodated in said transmission case;

at least a portion of said forward/rearward movement switching unit is positioned within said flywheel housing by connecting said second abutting surface of said flywheel housing to said abutting surface of said intermediate housing in a state with said forward/rearward movement switching unit supported on said support surface of said intermediate housing;

said hollow body portion of said intermediate housing accommodates ~~only~~ transmission shafts including a propeller shaft that transmits the rotational power toward said speed change unit from said driven shaft ~~shaft~~, and a main shaft that transmits the rotational power toward said PTO clutch from said drive shaft, in a state that no transmission units are ~~disposed~~ supported on said transmission shafts within said intermediate housing; and

said flange portion has an upper extension extending from a top wall of said hollow body portion towards an upper side of said hollow body portion, a lateral extension extending from a lateral wall of said hollow body portion towards a radially

outer side and inner side of said hollow body portion and a lower extension extending from a bottom wall of said hollow body portion towards the upper side of said hollow body portion so as to define said abutting surface, said supporting surface and said first-end opening, thereby connecting said flywheel housing and said intermediate housing to each other in a state in which a center axis position of said hollow body portion is displaced vertically downward from a center axis position of said flywheel housing.

2. (Previously presented) A frame structure of a vehicle according to claim 1, wherein said support surface is positioned closer to the second end in the longitudinal axis of the vehicle than said abutting surface.

3. (Previously presented) A frame structure of a vehicle according to claim 1, wherein said support surface is positioned at the same as or closer to a first end in the longitudinal axis of the vehicle than the abutting surface of said intermediate housing.

4. (Previously presented) A frame structure of a vehicle according to claim 1, wherein:

said reverser housing is supported on said support surface;

said reverser housing has a reverser housing body having an end wall that abuts said support surface so as to close the first opening of the intermediate housing and a peripheral wall extending from a peripheral edge of the end wall towards a first side of the vehicle along the longitudinal axis of the vehicle, and a lid for closing a first end of the reverser housing body along the longitudinal axis of the vehicle; and

said reverser housing is arranged so as to seal an inner space of the flywheel housing against the inner space of the intermediate housing in a liquid tight manner.

5. (Previously presented) A frame structure of a vehicle according to claim 1, wherein said transmission case has an inner space that is divided into a front chamber, an intermediate chamber and a rear chamber by a first intermediate wall and a second intermediate wall,

said front chamber accommodates the speed change unit,

said intermediate chamber accommodates a differential gear unit of the running-power transmission mechanism,

said rear chamber accommodates a PTO switch unit for performing power-transmission/power-shutoff from said PTO clutch to a rear PTO shaft and a mid PTO shaft, and

said PTO clutch is accommodated in a space above the differential gear unit within said intermediate chamber.

6. (Previously presented) A frame structure of a vehicle according to claim 5, further comprising a center plate interposed between said intermediate housing and said transmission for supporting said propeller shaft and said main shaft.

7-21. (Cancelled).

22. (Currently amended) A frame structure of a vehicle comprising a flywheel housing, an intermediate housing and a transmission case that are connected to each other along a longitudinal axis of the vehicle to constitute a vehicle frame with an inner space, and to accommodate a running-power transmission mechanism including a speed change unit for changing a speed of a rotational power from an engine via a forward/rearward movement switching unit,

said flywheel housing having a first abutting surface and a second abutting surface respectively located closer to a first end and a second end of said flywheel housing along the longitudinal axis of the vehicle, said first abutting surface including a first opening that is sized to allow a flywheel to pass therethrough, said second abutting surface including a second opening that is sized to allow a forward/rearward movement switching unit to pass therethrough,

said intermediate housing having a hollow body portion that extends along the longitudinal axis of the vehicle and a flange portion that is located at a first end of said hollow body portion, said flange portion having an abutting surface against which said second end of the flywheel housing abuts, a support surface that is located radially inwardly of said abutting surface so as to support said forward/rearward movement switching unit, and a first-end opening that is surrounded by said support surface and is closed by said forward/rearward movement switching unit, and

said forward/rearward movement switching unit including a reverser unit for switching the power transmission direction from a drive shaft extending along the vehicle longitudinal axis to a driven shaft, and a reverser housing for accommodating

said reverser unit and supporting said drive shaft and said driven shaft, said frame

structure being characterized in that:

said speed change unit is accommodated in said transmission case;

at least a portion of said forward/rearward movement switching unit is positioned within said flywheel housing by connecting said second abutting surface of said flywheel housing to said abutting surface of said intermediate housing in a state with said forward/rearward movement switching unit supported on said support surface of said intermediate housing;

said hollow body portion of said intermediate housing accommodates ~~only~~ a transmission shaft including a propeller shaft that transmits the rotational power toward said speed change unit from said driven shaft, in a state that no transmission units are ~~disposed~~ supported on said transmission shafts within said intermediate housing; and

said flange portion has an upper extension extending from a top wall of said hollow body portion towards an upper side of said hollow body portion, a lateral extension extending from a lateral wall of said hollow body portion towards a radially outer side and inner side of said hollow body portion and a lower extension extending from a bottom wall of said hollow body portion towards the upper side of said hollow body portion so as to define said abutting surface, said supporting surface and said first-end opening, thereby connecting said flywheel housing and said intermediate housing to each other in a state in which a center axis position of said hollow body portion is displaced vertically downward from a center axis position of said flywheel housing.

23. (Previously presented) A frame structure of a vehicle according to claim 22, wherein said support surface is positioned closer to the second end in the longitudinal axis of the vehicle than said abutting surface.

24. (Previously presented) A frame structure of a vehicle according to claim 22, wherein said support surface is positioned at the same as or closer to a first end in the longitudinal axis of the vehicle than the abutting surface of said intermediate housing.

25. (Previously presented) A frame structure of a vehicle according to claim 22, wherein:

said reverser housing is supported on said support surface;

said reverser housing has a reverser housing body having an end wall that abuts said support surface so as to close the first opening of the intermediate housing and a peripheral wall extending from a peripheral edge of the end wall towards a first side of the vehicle along the longitudinal axis of the vehicle, and a lid for closing a first end of the reverser housing body along the longitudinal axis of the vehicle; and

said reverser housing is arranged so as to seal an inner space of the flywheel housing against the inner space of the intermediate housing in a liquid tight manner.

26. (Previously presented) A frame structure of a vehicle according to claim 22, further comprising a center plate interposed between said intermediate housing and said transmission case for supporting said propeller shaft.